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17. ABSTRACT (MAX. 250 WORDS)

Beginning in 1958, students showing exceptional promise in science and mathematics were given an opportunity to participate in a year-round seminar. Students were chosen on the basis of their interest, abilities, and their performance on a written test. They entered the program at the end of their freshman year and could remain in it throughout high school as long as their general school performance, seminar attendance, and seminar quiz grades and performance were satisfactory.

The seminar was a joint effort between the Indiana County School Districts and the industries of the surrounding area and was a voluntary extra curricular activity for all involved. Seminar speakers and project supervisors were provided from the various industries participating. Students were expected to begin individual projects not later than the beginning of their junior year and to complete them during that year or the senior year. They could then present the project formally at a public display, and present it during one of the seminar periods reserved for that purpose. Seminar participation was limited to about 30 students per year. A list of seminar topics covered during the first two years was included.

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TD 1

INDIANA COUNTY

SCIENCE AND MATHEMATICS SEMINAR

A PROGRAM FOR GIFTED SENIOR HIGH SCHOOL STUDENTS

Woodrow L. Phillippi
Assistant Superintendent of Schools
Director

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U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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Ronald M. Coulter, Superintendent
of Schools

Alice H. Davis, Supervisor
Special Education

Max C. Harwick, Assistant Superintendent
of Schools

William M. Bahn
Psychologist

SCIENCE AND MATHEMATICS PROGRAM

A Program for the Gifted Student

INDIANA COUNTY SCHOOLS
Indiana, Pennsylvania

ORIGIN

In 1958, with the encouragement and guidance of Mr. Ronald M. Coulter, Assistant County Superintendent, and Dr. James Burk, High School Principal, a Science Seminar was established at Westinghouse Corporation at Blairsville, under the sponsorship of the high school principals and with the whole-hearted approval and support of the school boards and the high school science and mathematics staff.

Originally two students from secondary schools representing each high school in the county participated in the program.

In 1959-60, Westinghouse Corporation and Syntron Corporation sponsored the Science and Mathematics Seminar. However, in 1960, the Science and Mathematics Program was taken over and sponsored by the Joe Berg Foundation under the direction of Mr. Jacob W. Shapiro. Mr. Shapiro, Mr. Coulter and the Curriculum Committee discussed the feasibility of establishing the Seminar to complement the Science and Mathematics groups and to provide further opportunities to those students with an interest in science and mathematics.

The Seminar has continued functioning each year since its inception in 1958. However, with the 1963-64 school term, the program was no longer a part of or affiliated with the Joe Berg Foundation. The program is now a County Operated Program functioning independently of any private interests or foundations.

PURPOSE

The Science and Mathematics Seminar was planned to begin immediately after the opening of school in the fall of 1958 to:

A. Interest and stimulate gifted students in the development and broadening of their perspectives in the science and mathematics fields.

B. Encourage these students to undertake a project in the fields of mathematics or science, in the nature of research, thesis, or other creative work.

For this purpose a gifted student was defined as one of exceptional ability or interest in the science and mathematics field, with a high I.Q. and capable of ranking in at least the upper 1% of his class.

This program was established as an entirely voluntary extra curricular activity on the part of the students, industry and professions.

PARTICIPATION

The nine administrative units which are in Indiana County participated in the formation of the Science and Mathematics Seminar. These schools include: Blairsville, Elders Ridge, Indiana, Laura Lamar, Marion Center, Penns Manor, Purchase Line, Saltsburg and United. These schools have a total enrollment of 5,242 in grades nine through twelve.

Limiting the Science and Mathematics Seminar to 32 students, meant a student would have to be in the top 1% to qualify.

Recruitment of instructors and sponsors is not limited to the area of the school districts. Within a relatively short radius of 50 miles we are fortunate in having many industries and colleges to participate in the program.

STANDARDS

If the purposes of such a program are to be achieved, high standards of selection, attendance and achievement must be set and maintained.

A. Selection:

1. Students to be nominated for participation in the program during ninth grade.
2. Nomination based on teacher recommendation with approval from high school principals and supervising principals. Teacher interpreted to include guidance counselors and administrators, as well as science and mathematics instructors.

3. It has been the express policy of the Science Seminar that the following two groups of students be specifically invited to take the examination and apply for admission:

   a. Honor students whose scholastic record and apparent capacity to learn would justify extending this opportunity for enrichment to them.
   b. Those pupils normally classed as "capable but not working to capacity", in the hope that this program might provide the motivation for better all-around scholastic effort.

4. Interviews by the School Selection Committee

5. Examination results

   a. A battery of examinations is used
   b. Tests are selected by a committee composed of the Supervisor of Special Education, a guidance counselor and a member of the science staff of Indiana State College.
   c. Students ranking highest on the test are invited to participate with each school administrative unit having representation.

6. Parental permission for student participation and a pledge of cooperation must be received before student is admitted to take the qualifying examination. Appendix I suggests a letter that might be sent to parents explaining the Seminar.

B. Attendance:

1. Most schools in Pennsylvania have a nearly uniform set of attendance rules. Under the Science Seminar Program, a committee headed by one of the high school principals has adopted the following rules for the Science and Mathematics Seminar:

   a. Student attendance must meet the same standards as apply to local school attendance.
   b. Absence for the following reasons will be accepted as legal absence:

      Illness of student
      Illness or death in family
      Impassable roads, or weather which makes travel unsafe
      Quarantine
      Court appearance

   c. Excuses will be required, and failure to receive an excuse at the next consecutive meeting will result in classification of the student's absence as "illegal".
   d. Only two illegal excuses will be accepted during the year, and these will include vacation absences, if any occur.

e. Attendance records will be kept by a recorder responsible to the Seminar Director.

2. The Seminar operates through the school year beginning in September and ending the first week in June.

3. Transportation is left entirely to the student and his parents.

C. Achievement:

All students are expected to be in good standing in their own particular schools while attending the Seminar. Failure to do so results in the withdrawal from the Seminar.

METHOD OF OPERATION

A. School Board Approval:

1. The Science Seminar is set up within the framework of the school system. The school administrator and teachers will best be able to provide the local information needed and the medium of coordination required.

2. It is highly desirable that a school board approve students participating in the Seminar program. It has been our experience that school boards welcome this type of program as extending to the gifted child opportunities which cannot readily be included in the regular school program.

B. Committees: Organization and Duties

1. Curriculum Committee

a. This committee consists of a member from the staff recruitment committee, some members of the Seminar staff, and science and mathematics teachers of the local high schools.
b. Duties: Develop a broad curriculum pattern, recommend to the staff recruitment committee areas in which staff members are needed. Suggest possible staff members and assist in procuring them where possible.

2. Staff Recruitment Committee

a. Includes someone from the business profession, Seminar Director, and individual teachers from the school districts.
b. Duties: To compile a list of all members of professional groups related to the Science and Mathematics area. To interview the above, to solicite their participation in this progra.

3. Project Committee

a. This committee is composed of five science and mathematics teachers approved by the science and mathematics departments of all the high schools. Leaders from industry are also included in this committee.

b. Duties: To provide help or assist students in the Seminar in selecting a project. Review any particular projects that are underway in the 12th grade. See that projects are completed and are ready to present the last six weeks of the Seminar.

C. The Staff:

1. Seminar Director

a. Assistant County Superintendent of Schools acts in this capacity.
b. Duties: To help the Staff Recruitment and Curriculum Committee to conduct the program and assist in any other way to improve the program.

2. Seminar Chairman

a. There is a science teacher from the Indiana State College staff who has been selected by the County Advisory Committee.
b. Duties: Directs weekly seminars. Works with Curriculum Committee in setting up curriculum. Arranges revision of schedule if necessary. Arranges for physical facilities required: visual aids equipment and etc. Checks attendance, rules on absence excused, coordinates all sessions.

D. Evaluation:

1. The Seminar Chairman evaluates each program according to certain standards. In addition the evaluation includes the various reactions of the students. A weekly report is sent to the Seminar Director and is kept on file for further and future use.

2. NOTE: See Appendix II for sample evaluation form.

GENERAL INFORMATION

A. Lecture Program

1. The program consists of lectures given one each week.
2. Students are required to attend all lectures during their Sophomore and Junior years unless they provide an excuse suitable to the Seminar Chairman.
3. During their Senior year, students may elect to attend lectures of interest to them; however, attendance is not compulsory.

B. Student Seminar Program

1. During the Senior year, students will conduct their own small Seminars devoted to an exchange of information on specific subjects.
2. Each Seminar will consist of a suggested maximum of eight students, each interested in the same general area of science.
3. Each student will make at least four presentations during the year to the group and discussion will follow.
4. The volunteer project sponsors will serve as moderators in each of these groups.

C. Field Trips

1. One of the objectives of the Science Seminar is to provide field trips where these pupils can see science and mathematics in operation. Some field trips have been to: The Atomic Energy Plant at Saxonburg, and the Gas Storage Plant near Murrysville, Pennsylvania.

D. Projects

1. A project committee, consisting of a chairman and three or four science and math teachers, function during the school year.
2. The duties of the committee are to make and revise project guidelines, review and approve student projects, and perform whatever duties the Seminar Director may suggest in regard to projects.
3. Appendix III presents the Tentative Guidelines for Seminar projects.

E. Responsibility of Students

1. He must attend all lectures. Good reason must be given for all absences and more than two absences per year for reasons other than illness constitute cause for being dropped from the Seminar.
2. Each student is responsible for the subject matter of all lectures.
   a. He must keep a notebook
   b. He must read outside of class
   c. He must take and pass periodic examinations.
   d. He must undertake a project involving experiments, reading, construction, etc.
3. Each student must maintain good grades (A-B) in regular class work in all subjects and his behavior must be satisfactory.

INDIANA COUNTY SCIENCE PROGRAM

1960-1961

Date 1960	Topic	Assigned to:
Sept. 21	Fundamentals of Research	Syntron Company Dr. R. C. Hitchcock
Sept. 28	Hospital Laboratory Techniques and Pathology	Indiana Hospital Dr. John Spaeder Dr. J. Householder
Oct. 5	The Origin of and Exploration for Coal	Penn State University Dept. of Mineral Industries Dr. Spackman Dr. Hartman
Oct. 12	Introductory Physical Metallurgy	Westinghouse Mr. E. C. Bishop
Oct. 19	Elementary Gas Chromatography	Fisher Scientific Dr. D. M. Ottenstein
Oct. 26	Moving Materials by Vibration	Syntron Company Mr. William Spurlin
Nov. 2	New Arts in Communication	Bell Telephone Mr. E. H. England
Nov. 9	Light Dispersing Elements	Fisher Scientific Dr. T. Clark
Nov. 15	Thermodynamic Properties of Common Substances	Joy Manufacturing Co. Mr. Donald Wiebe
Nov. 23	Magnetic Materials	Westinghouse Mr. R. H. Buckwalter
Nov. 30	Solid State Physics	Syntron Company Mr. N. P. Bosted
Dec. 7	Anatomy and Physiology of the Eye	Dr. Dorsey Hoyt
Dec. 14	Hydraulic and Bimetallic Electric Controls	Robertshaw-Fulton Mr. S. E. Manecke

Dec. 21	Engineering Techniques in Opening Coal Mines	R. & P. Coal Company Mr. J. J. Schaffer
1961		
Jan. 4	Refractory Metals	Westinghouse Corporation Mr. Mario Zambernard
Jan. 11	Rubber Compounding	McCreary Tire & Rubber C Mr. Lawrence Longworth
Jan. 18	The Circulatory System	County Medical Assoc. Dr. R. F. Waldo
Jan. 25	The Magic of Fire	U. S. Bureau of Mines Mr. Hal H. Engel
Feb. 1	Fundamentals of Spectrophotometry	Fisher Scientific Mr. J. E. Kolter
Feb. 8	Cancelled (snow)	
Feb. 15	Tire Design	McCreary Tire & Rubber C Mr. Richard Sollinger
Feb. 22	Corrosion Due to Electrolysis	Peoples Natural Gas Mr. C. A. Erickson
March 1	Drugs and Body Chemistry	Pharmacists Donald J. Kinter
March 8	Radioactivity in the Gas and Oil Industry	Birdwell Company Robert M. MacFarlane
March 15	Operations Research	Westinghouse Mr. Frank L. Winne
March 22	Mathematics and Statistical Control	McCreary Tire & Rubber C Mr. Neil Swarts
March 29	Geology - Its principles and its Application to Indiana County	Penna. Dept. of Interna Affairs, Geological Survey Mr. Addison Cate
April 5	Geology of Oil and How We Get All the Oil Out of the Ground	Halliburton Company Mr. Ray Wenzel Mr. John Thompson
April 12	Seismographing	Birdwell Company Mr. Heineck Mr. Thomas Kuhn

April 19	Management as a Career	Ernest & Ernest Co. Mr. James Bassage
April 26	Radioisotopes and the Treatment of Disease	Indiana State College Mr. Dan Reiber
May 3	Guided Missiles USAF Middletown	McCreary Tire & Rubber Mr. Shaffery Day Mr. Harold Reed
May 10	Geological Exploration for Natural Gas	Peoples Natural Gas Mr. G. O. Scott
May 17	Petroleum and Its Related Products	Esso-Standard Oil Mr. H. F. Heflin
May 24	Orthodontias and General Dentistry	Dental Assoc. Dr. D. K. Yourd
May 31	Highway Construction and Design	Dept. of Highways Mr. William Altemus Mr. Michael Rura
June 7	The Actuarial Basis of Insurance	Mr. Joseph Reschini
June 14	Coal Research and Future Developments	R. &. P. Coal Company Mr. Gerald Von Strough
June 21	Coaltricity	Penelectric Company Mr. W. J. Utts
June 28	Chemical Explosives	DuPont Company Mr. Harry Hall
July 5	Vacation	
July 12	New Seminar Year Starts	

INDIANA COUNTY SCIENCE SEMINAR PROGRAMS

1961-1962

DATE 1961	TOPIC	ASSIGNED TO:
July 12	Physiology of the Ear	Dr. Dorsey R. Hoyt
July 19	IBM Computors	Mr. Philip Johnson I B M
July 26	Coaltricity	William J. Utts Penna Electric Co.
August 2	Clocks, Watches, Timepieces	Mr. Morris Widdowson Widdowsnn's Jewelry
August 9	Guns, Gunsmithing	Mr. Ted McQuilkin Twolick Creek Gun Club
August 16	How to Express Yourself in Writing	Mr. Fred Deichert Syntron Company
August 23	Modern Architecture	Mr. Jack Risheberger Heidrick & Risheberger
August 30	Combustion Engines	P. F. Bartele D. K. Miller Howard Nesbitt Cadillac Motor Car Div.
September 6	Forestry	Richard C. Bedger Musser Forests, Inc.
September 13	Cancer Cell Growth	Mrs. J. S. Mack Dr. Fred Kellam
September 20	Navigation	Commander N. B. Baker USNR
September 27	Similarities of Wave Behavior Micro-wave and optical Mazer	Robert L. Brimner L. C. Mason
October 4	Automation	J. W. Philippovic Syntron Company
October 11	Statistics	Dr. James E. McKinley Indiana State College
October 18	Safety	Mr. Craig Patterson Rochester & Pittsburgh Coal Company

October 25	Banking in General Requirements for good credit rating Services of the Trust Department	Mr. Robert W. Fiscus Mr. Robert Fullerton Mr. Louis Jack
November 1	Science of Fire	Mr. Herbert McAnulty Syntron Company
November 8	Organized Labor	Mr. Harvey Younker U.M.W.A.
November 15	Fibers and Fabrics	Miss Mildred Oswake Indiana State College
November 22	The Science of Management	Dr. James Stoner Indiana State College
November 29	Animal Breeding	John H. Ziegler Penn State University
December 6	Psychoanalysis and Psychiatry	Dr. Roderick McLeod
December 13	Theory and Game Analysis in the Field of Economics	Mr. B. K. Hartman Syntron Company
December 20	Dinosaurs, Man and the Brain	Dr. D. E. Hoffmaster Mr. C. J. Zenisek
January 3	Science in Crime Detection	Harold M. Moorhead Pa. State Police
January 10	Radiology, Radiation from Radium and Radioactive Isotopes in Treatment of Disease	H. C. Long, M. D. Indiana Hospital
January 17	Economics of Finance, Investments	Mr. S. E. Clelland Elmer E. Powell & Co.
January 24	Strength of Various Materials, Compression, Wood, Metal, Plastics	Mr. W. V. Spurlin Syntron Company
January 31	Classification, description, preparation and uses of Ceramics used in Electrical Industry	Mr. John Harnish Westinghouse Electric Mr. George Martin
February 7	Fossils, Definition, how formed, types Importance	Dr. Donald Hoffmaster Indiana State College
February 14	Thought and Logic puzzles, Logic in Mathematics, Mathematical puzzles, special mathematical puzzles	Miss Laura Church Mr. Clifford Simpson
February 21	Integration of Geometry and Algebra	Mr. Edwin Bailey Indiana State College
February 28	Theory of Atoms, Molecules, and Crystals	Edward N. Brown Indiana State College

March 7	Scientific Background of Spectrophotometry Electromagnetic Spectrum, Interaction between matter and emergy.	Mr. James Cannon Fisher Scientific
March 14	New Treatments for Mental Illness	Dr. Saul Greiman, M. D. Torrance State Hospital
March 21	Predictions Based on Theory and Experimenting to Test These Predictions	Mr. Daniel G. Reiber Indiana State College
March 28	Electrical Theory, Uses of AC and DC. Resource for Rectifiers.	Mr. Harold Wood Syntron Company
April 4	Cell Division, Production and Development of the Embryo of the Frog	Dr. Walter Gallati Indiana State College
April 11	SEVEN OF THE SENIORS PRESENTED THEIR PROJECTS	
	Influence of Light, Fertilizer and Irradiated Seeds on Plant Growth	Janet Adams, Senior Blairsville Joint
	Atomic Models	Carole Aldrich, Senior Blairsville Joint
	Electrolysis	Jane Boering, Senior Indiana Joint (Keith)
	Building a Reflecting Telescope	Avonel Crist, Senior Marion Center Joint
	Radio Wave Propagation	Robert Nuss, Senior Marion Center Joint
	Astrophotography	Paul Stenman, Senior Marion Center Joint
	Effect of Balanced Diet vs Unbalanced Diet on Guinea Pigs	Beckie Walker Marion Center Joint
April 18	Shaft Seals, Concepts and Problems of Design Test evaluating of materials	Mr. Alfred Moore Syntron Company
April 25	Elements of Accounting, Theory of Debit and Credit. Accounting Procedure.	Mr. W. W. Allshouse Syntron Company
May 2	Testing Soil and Forage, Soil Conservation Dairy Herd Improvements	Ward M. Stover County Ag. Agent
May 16	Time Motion Study in Manufacturing	Richard Lawry Syntron Company
May 23	Science and Art Inolved in Usual Sounds, Chords, Dischords, and Modern verse. Traditional	Dr. H. S. Overdorff Indiana State College

INDIANA COUNTY SCIENCE SEMINAR PROGRAMS

1962-1963

DATE 1962	TOPIC	ASSIGNED TO
September 5	Pure and Applied Science	Syntron Company Dr. R. C. Hitchcock
September 12	Crystals	Aluminum Co. of America Mr. Wm. G. Fricke, Jr.
September 19	Radioisotopes in Medicine	Dr. Walter Jetter
September 26	Elements of Thermostats	Robertshaw-Fulton Co. Robert S. Crawford
October 3	Telstar	Bell Telephone Edward A. Mason
October 10	Plastics	Plastic Division Mr. Neese
October 17	Mathematics and Logic	West Penn Power Co. Mr. Peter Hadfalvi
October 24	Magnetic Theory	Westinghouse Electric Mr. Richard Buckwalter
October 31	Identification - Science in Crime	Bureau of Criminal Investigation Columbo Previte Corp. Karl Egar
November 7		Westinghouse Elect. Co. S. Bartnoff
November 14	Modern Mathematics	Indiana State College Ida Arms
November 21	Structure and Function of the Eye	Dr. Robert Goldstrohm
November 28	Pyrotechnics	Federal Laboratories Dr. W. H. Durno
December 5	Moving Materials by Vibration	Syntron Company Mr. Arthur Jones

December 12	Cardiovascular System	Dr. R. F. Waldo Physician
December 19	Skin and Scuba Diving	United States Steel Wallace Mundell

1963

Jan. 2	Tire Engineering	McCreary Tire & Rubber Richard Sollinger
Jan. 9	State Mental Hospitals and Psychiatric Services	Dr. William Schilling Mr. Norman Gaitens Dr. Frank Stugart Dr. Esther Toms Torrance State Hospital
Jan. 16	Ultra-Sonics in Testing for Flaws in Pieces of Metal	Mr. F. C. Panion Alcoa Research Laborato
Jan. 23	Manufacture of Silicon and Selinium Rectifiers	Mr. William McNanny Mr. Harold Wood Syntron Company
Jan. 30	The Autocyctometer	Nevitt Louder Fisher Scientific
Feb. 6	Radiology	Dr. H. C. Long Indiana Hospital
Feb. 13	The Challenge of Dentistry	Dr. Donald K. Yourd Dr. G. J. McLaughlin
Feb. 20	Kinds of burning, conditions and preventions	Mr. Hal Engle U. S. Bureau of Mines
Feb. 27	Magnetism, Manufacture and Use	Mr. Arthur Ritenour Robertshaw-Fulton Co.
March 6	Liquifaction of Gases	Mr. Robert Hughes Joy Manufacturing Co.
March 13	Photography	Mr. Donald MacIsaac Indiana State College
March 20	Theory of Games	Mr. Charles DeSalvo Westinghouse Electric
March 27	Petroleum Industry	Mr. J. J. Furjanic Humble Oil and Refining
April 3	Biological Research	Mr. C. G. Vassilaros Gateway Senior High Sch
April 10	Metallurgy	Mr. E. C. Bishop Westinghouse Electric

April 20	Field Trip to Pumping Station at Monroeville	Peoples Natural Gas Co.
April 25	Field Trip to Atomic Energy Plant at Saxton	
May 1	Food Processing	Mr. James Segmiller J. Heinz Company
May 8	Presentation of Projects by Seniors	
	Wild Flowers of Indiana County	Nancy Sahli Indiana Joint
	The Strobic Effect and Corresponding Mathematical System	William Jones Saltsburg
	Vitamin Deficiency Studies Using Hamsters	Penny Barchfield Elders Ridge Joint
	Van de Graaff Generator	George Seigh United Joint
	Multiflash Stroboscope	Harry Kinter Laura Lamar
May 15	Gas Chromatography	Mr. Walter Piekarski Mr. Dennis Bowser Fisher Scientific
May 22	Science Astronomy - Telescopes	Mr. Robert Woodward Indiana State College

INDIANA COUNTY SCIENCE SEMINAR PROGRAMS

1963-1964

DATE 1963	TOPIC	ASSIGNED TO
September 11	Rocketry - Jet Engines	Mr. Fred Yeoman Westinghouse Electric
September 18	Nuclear Changes - Peaceful Use of Atomic Energy	Mr. Hugh Numec
September 25	Electron Microscope	Dr. Irvin Bendet University of Pittsburgh
October 2	Psychoanalysis and Psychiatry	Dr. Roderich McLeod
October 9	Trapping Time with Photography	Mr. H. Y. Hunsicker Aloca Research Lab.
October 16	Volcanic Eruption	Dr. A. F. Fredrickson University of Pittsburgh
October 23	Aerial Surveying	Mr. Roy Barclay West Penn Power
October 30	Space Age Astronomy	Mr. N. E. Wagman University of Pittsburgh
November 6	The Magic of Fire	Mr. George Svilar Mr. Hal Engel U. S. Bureau of Mines
November 13	Industry's Contribution to Our Standard of Living	Mr. E. G. Kort Aloca Research Lab.
November 20	Instrumentation	Mr. Fred Baldwin Mr. Walter Piekarski Fisher Scientific
November 27	Geological Exploration of Natural Gas	Mr. Wallace Henson Peoples Natural Gas
December 5	Ceramic Art and Technology	Dr. Lawrence McVitty Mr. John Perri Indiana State College
December 11	New Arts in Communication	Mr. O. B. McMillen Bell Telephone Co.
December 18	Sound, A Wave Phenomenon	Mr. Paul Waddell Indiana State College

1964

January 8	Pharmacy	Dr. Donald Kinter Pharmacist
January 15	Statistics	Dr. James McKinley Indiana State College
January 22	Cancer Cell Growth	Dr. M. F. Dills Physician
January 29	Refractory Metals	Dr. Adolph Goldenstein Westinghouse Metals Plan
February 5	Pennsylvania Game Commission Activities	Mr. Sam Weigel District Game Protector
February 12	Forestry	Mr. Richard Bedger Musser's Nursery
February 19	How to Express Yourself in Writing	Dr. James Green Indiana State College
February 26	Calculus	Mr. William Smith Indiana State College

APPENDIX I

To: High School Principals

It is suggested that the letter below or one similar to it should be sent to all parents who have children nominated to take the Science and Mathematics Seminar Screening test. This should be on your own letterhead and sent out no later than sometime in April in order that parents may be able to inform you whether or not they are interested in having their child take the qualifying examination. You should enclose a stamped envelope addressed to the school.

Woodrow L. Phillippi

SUGGESTED FORM LETTER

Dear Mr. and Mrs._____:

The Indiana County Board of Education has approved and enthusiastically endorsed the Science Seminar for gifted students. This series of programs will commence on the first Wednesday after Labor Day at Indiana State College. It will be a joint project in cooperation with all the high schools located in the county.

The faculty on this Seminar will be outstanding scientists connected with various Indiana and neighboring county industries and the Indiana State College. The purpose of this Seminar will be to offer challenging opportunities to the talented students in tenth, eleventh and twelfth grades with aptitudes and interests in the science and mathematics fields.

The selection of students for this special one-night per week seminar discussion group will be based on school records, recommendations by principal, guidance counselors and high school teachers and on the results of test records.

On the basis of inherent ability and potential, your (son or daughter) has been recommended as one of approximately 75 students in the area capable of competing for a place in the Science Seminar. The finally selected group will be limited to approximately 15 to 20 participants.

The Seminar will not be a credit course. There will be no charges involved except perhaps some minor costs for individual research project selected by the student himself later in the Seminar.

The Science Seminar can be described as an educational device for offering science students of exceptionally high ability, instruction in Science concepts, methods and applications that are more advance, rigorous and individualized than can at present be offered under regular high school curriculum. It is distinguished in that it successfully enlists as teachers, technologists and professional scientists of the community.

In evaluating the high school curriculum, it has been felt that one outstanding need has been to find a method of challenging satisfactorily the talents of the superior student. This projected seminar program will offer to such students the opportunity to meet with and learn from working scientists in the community. It is a project of school, industry, and community cooperation. We are indeed fortunate in this community to be able to call on specialized help, as discussion leaders, of outstanding scientists. For your information a partial list of the members of the faculty is attached.

If (son or daughter's name) is interested and excited by the opportunity and privilege and would like to take the examination, please complete and return the attached application blank not later than April _____, 19____.

Should you need to have any questions answered regarding the Seminar, please feel free to contact us.

Sincerely yours,

_____
High School Principal

To: _____
High School Principal or Guidance Director

_____
Address

Please enroll me as an entrant in the special science examination to be given at the State College, Indiana, Pennsylvania, in early May, 19___. (More details later)

I understand that acceptance for the Science Seminar will depend upon the results of this examination.

Student's Name _____

School _____ Grade _____ 19____ - ____

Parent's Signature _____

APPENDIX II

Office of the Superintendent
Indiana County Public Schools
Indiana, Pennsylvania

Report on Indiana County Seminar

_____
Date

Attendance: No. Present_____ No. Absent_____

No. Absent and Unexcused for two or more Sessions_____

Speaker(s) _____ _____
Name Company Name

_____ _____
Company Address

_____ _____

Brief Description of Program: _____

_____

_____

PROGRAM EVALUATION

Chairman's Evaluation: Superior _____ Average_____ Below Average_____

General Reaction of Students: Superior _____ Average_____ Below Average_____

Project Progress:_____

_____

_____

NEXT WEEK'S PROGRAM

Speaker Topic

_____

_____

Please send to: Woodrow L. Phillippi
Assistant Superintendent
7 N. 6th Street
Indiana, Pennsylvania

9-12-63

TENTATIVE GUIDELINES

INDIANA COUNTY SCIENCE SEMINAR PROJECTS

The project director will explain fully the meaning and purpose of the project, perhaps in a lecture at the beginning of the seminar.

The deadlines for completed projects plus a list of the project procedures will be given each student.

More information will be made available to all schools about the Indiana County Science Seminar. A central information point will be established for students and teachers involved.

A seminar project committee will be set up with representatives from each science for evaluating the projects. This committee will screen the suggested projects and if the project meets with the approval of the committee, let the student know. If the committee disapproves, the student will be given another chance to submit an acceptable project outline. This committee will meet at least once a year. Teachers from the schools involved will serve on the committee.

Teachers of science and math in the student's school will meet with him periodically to direct him in choosing a project, provide him with reference material, discuss projects and their scope, and help him in any possible way.

After a project is selected with the seminar committee's approval, the student will submit progress reports to the committee at regular intervals (6-8 weeks) to keep the committee informed on the work done. The purposes of this procedure are:

a. The submission of a periodic report will stimulate the pupil to make progress.

b. Reports will reveal any difficulties the student encounters, and the need for advice and help.

c. Reports will be evaluated and returned to the pupil with suggestions and encouragement to continue.

d. A discussion period during which the student may talk over his project with the other members of the seminar may be valuable in terms of an exchange of ideas among the students.

PROJECTS

Projects should be clearly defined and discussed in the tenth year, studied and worked on in the eleventh year, developed and completed in the twelfth year.

Ideas for projects should be discussed in the participating school with the teachers involved.

A preliminary outline must be given to the project committee for approval.

Projects should be original as far as the student is concerned, should include both theory and application, and should present a challenge to the student.

Projects should be accompanied by a bound notebook showing records, sketches, information, and drawings, as the student worked.

Projects should be something tangible -- work with something such as a model, demonstrations, charts, or statistics.

No assembly kits should be used unless improved upon.

Student should carry out some definite activity -- he should be trying to find out something for himself.

Projects should be presented in the twelfth grade to be viewed by teachers and students involved.

PRESENTATION

1. A display if possible
2. A brief summary given orally
3. Keep a record in a notebook as work progresses and have notebook on display
4. Show whatever drawings, sketches, or pictures needed
5. Information should be well planned and well organized
6. Watch grammar and correct English usage
7. Remember: You can spoil an excellent project by a poor presentation.